

杨柳科新植物(2)

毛品一 李文政

(西南林学院, 昆明)

PLANTAE NOVAE SALICACEARUM (2)

Mao Pinyi, Li Wenzheng

(South-western Forestry College, Kunming)

关键词 柳属; 扭尖柳; 大关柳; 溪旁矮柳; 石流垫柳; 岩壁垫柳

Key words *Salix*; *S. contortiapiculata*; *S. daguanensis*; *S. rivulicola*; *S. glara*; *S. scopulicola*

扭尖柳 新种 图1

Salix contortiapiculata Mao et W. Z. Li, sp. nov.

(Sect. *Magnificae* Schneid.)

Haec species nova habitu *S. medogensi* Y. L. Chou et *S. magnificae* Hemsl. var. *apatelae* (Schneid.) Hao similis, sed foliis apice contorsa apiculatis, marginibus interdum sparsim denticulatis, bractea apice undulati-denticulata, glandula subsimisi urceolata, circ. 2/3 bractea aequante, ab ambae differt, a priore abhorret ramulis glabris, rhachivus bracteisque parciore pilosis, a posteriore distinctas foliis petiolis bractersque sparse pubescentibus.

Frutex 1.5—4 m altus. Ramuli glabri, afro-purpuracentes, gemmae late ovatae, obtusae, glabrae purpurescents, circ. 5 mm longae. Folia obovato-oblonga, 5—9 cm longa, 2.2—4.2 cm lata, apice contorti-apiculata, basi subrotundata vel late cuneata, supra viridia glabra vel ad basin costarum ferrugineo-pubescentia, subtus glauca, primo villosa demum glabrescentia, margine integra vel sparsim denticulata; petioli 6—14 mm longi, supra ferrugineo-pubescenti. Amenta fructifera 5—7 cm longa, circ. 7 mm crassa, pedunculis 2.5—4 cm longis, folia 3—4 normalia gerentibus suffulta, rhachis puberula, ovaria ovato-conica, glabra, sessilia vel subsessilia, stylis circ. 1 mm longis bifissis, stigmatibus bifidis, bractae late oblongae vix 2.5 mm longae extus et

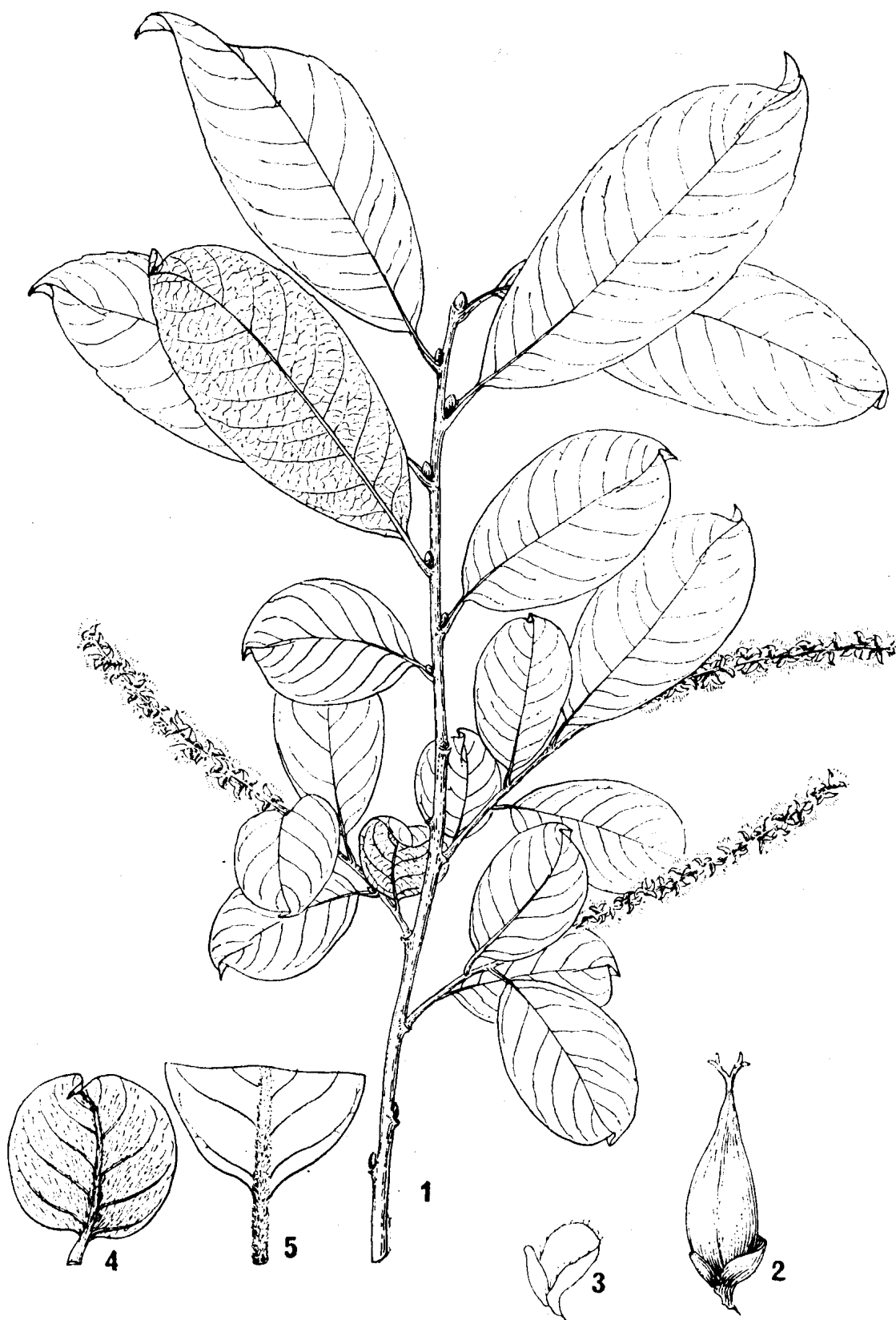


图1 扭尖柳 *Salix contortiapiculata* Mao et W. Z. Li, 1.果序枝, 2.幼果, 3.苞片和腺体, 4.花序梗幼叶背面, 5.叶上面。(王红兵绘)

margine paulo pilosae vel subglabrae, apice obtusirobundatae, undulati-denticulatae glandula una ventralis circ. 1.5 mm longa, subsimilis urceolata, circ. 2/3 bractea aequanta. Flores masculini ignoti. Fructus VII.

Yunnan (云南): Gongshan Xian (贡山县) prope Dulongjiang (Taron), alt. 1900 m, VII. 1979, Lin Qin (林芹) 79075 (♀) (Holotypus, KUN); ex eadem loco, alt. 300 m, 26. VII. 1982, Qingzang Exped. (青藏队) 8973 (♀).

本新种外形与墨脱柳 *S. medogensis* Y. L. Chou 和倒卵叶大叶柳 *S. magnifica* Hemsl. var. *apatela* (Schneid.) Hao 相似, 但叶先端有扭转短尖头, 边缘有时有疏齿, 苞片先端有波状齿, 腺体近似瓶状, 约为苞片长度的 2/3, 与二者都不同。又与前者区别为小枝无毛, 序轴和苞片的毛较稀少, 与后者的区别为叶柄和苞片有疏柔毛等。

小叶大叶柳 新变种

Salix magnifica Hemsl. var. *microphylla* Mao, var. nov.

Differt a *S. magnificae* Hemsl. var. *magnificae* foliis minoribus plerumque 3—5 (non 20) cm longis, 2—3.5 (non 11) cm latis, fructiferis brevioribus 7 (non 23) cm longis.

Yunnan (云南): Gongshan Xian (贡山县) prope Dulongjiang, alt. 3100 m, in sylvis abietinis, frutex 2—3 m altus, 22 VII 1982, Qingzang Exped. (青藏队) 8418 (♀) (Holotypus, KUN).

不同于原变种在于叶小, 通常长 3—5 厘米, 宽 2—3.5 厘米, 不是长可达 20 厘米, 宽可达 11 厘米, 果序长 7 厘米, 不是长达 23 厘米。

大关柳 新种 图 2

Salix daguanensis Mao et P. X. He, sp. nov.

(Sect. Denticulatae Schneid.)

Haec species nova affinis *S. opsimanthae* Schneid, et *S. pseudowolohoensi* Hao, ab utroque foliis oblongi-lanceolatis, amentis in apice ramulis quoque axillaribus differt.

Frutex 2 m altus. Ramuli hornotini tantum apice fulvidi-pubescentes; gemmae magnae, longi-ellipticae petiolis duplo brevior vel longior, fulvidi-pubescentes. Folia oblongo-lanceolata, 4—8 cm longa, 1.2—2.4 cm lata, supra viridia, glabra vel sub costa inferne pubescentia, subtus glauca, juvenilia parce sericea, demum tantum nervis pilosa, costa nervisque lateralis supra conspicua, infra elevata, margine indistincte leviter glanduloso-serrata; petioli 6—10 mm longi, pubescentes. Amenta tardi flora, tenuiter cylindrica 3—7 cm longa, circ. 4 mm crassa, in quoque axillis ramulorum apicalium gesentia, sessilia vel pedunculata, matura ad 1.5 cm longa, rhachis pilosa, bractae oblongae, fulvae, apice rotundatae, utrinque albo-villosae, stamina 2 raro 3, filamentis liberis 1/3 inferne albo-pilosis bracteis duplo longioribus, glandulae 2 raro 1, ventralis dorsalisque integrae vel bipartitae, interdum tantum ventr-

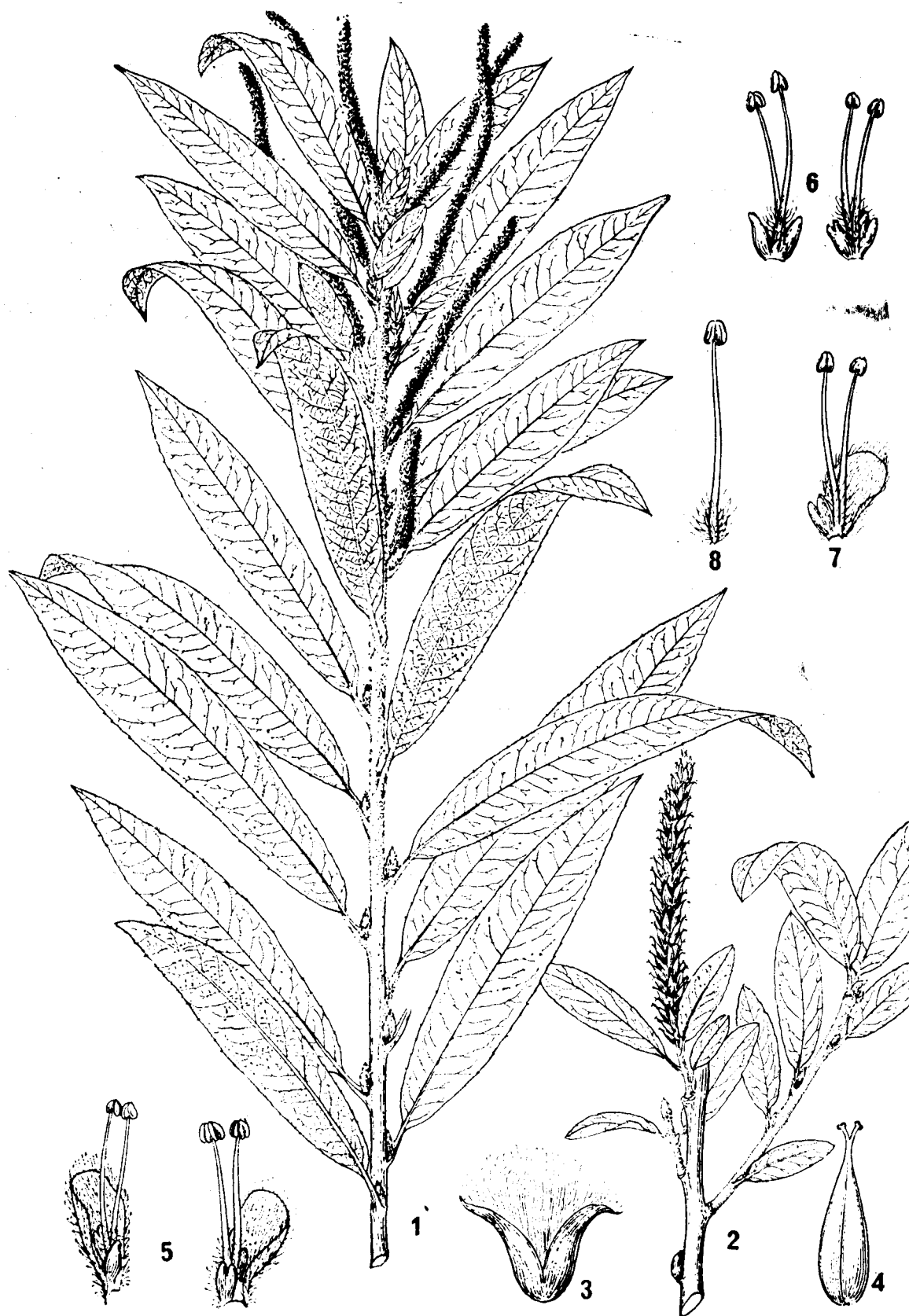


图2 大关柳 *Salix daguanensis* Mao et P. X. He, 1.雄花枝; 2.雌花枝; 3—4.果;
5.雄花; 6.去苞片后示雄蕊和腺体; 7.无背腺的雄花; 8.雄蕊。(王红兵绘)

alis vel dorsalis bipartita; ovaria ovato-conica, glabra, sessilia, stylo circ. 1 mm longo, apice bipartito, stigmato bitido; glandula ventralis 1, dosalis nulla. Anthesis VII. Fructus X.

Yunnan (云南): Daguan Xian. (大关县) Mafengwan, alt 1750 m, 18 VII 1972, NE-Y, Exped. (滇东北队) 211 (♂) (Holotypus, KUN); Yiliang Xian (彝良县), Chaotianma, alt. 1900—2000 m, 21 X 1973, K. M. Feng (冯国楣) 73-385 (♀).

本种与迟花柳 *S. opsimantha* Schneid. 和西柳 *S. pseudowolohoensis* Hao 有亲缘关系, 不同于二者在于叶长圆披针形, 花序生于枝条先端各叶腋。

娃娃山矮柳 新变种

Salix oreinoma Schneid. var. *wawashanica* Mao et P. X. He, var. nov.

A typo differt partibus omnibus (praeter filamentis) indumentis saepe ochraceis, bractea masculia glabra non praesertim margine sericeo-villosula et feminea utrinque pubescente non tantum extus prope basin villosa. Etiam ramorum foliorumque indumento et colore *S. inamoenae* Hand-Mazz. proxima, distincta foliis obovatis, amentis in apice ramuli terminalibus

Yunnan (云南): Jingdong Xian (景东县), Beiwawa shan, Alt. 3200 m, in dumosis alpinorum, frutex 1 m altus, amenta glauco-viridia, 25. V. 1963, Wu Quanan (武全安) 9345 (♂) (Holotypus, KUN); Yungbi Xian (漾濞县), Maidihou shan, frutex 20 cm altus, alt. 3470 m, 10. VI. 1980, Qian Hong-qiang 10368 (♀) (in HGUY, conservatur).

不同于原变种在于各部位 (除花丝外) 的毛被常淡黄色, 雄花的苞片无毛, 非特别是边缘有绢质长柔毛, 雌花的苞片两面有毛, 非仅外面基部有毛。又小枝和叶的毛被情况及颜色极似丑柳 *S. inamoena* Hand-Mazz. 不同在于叶倒卵形, 花序生小枝顶端。

溪旁矮柳 新种 图 3

Salix rivulicola Mao et W. Z. Li. sp. nov.

(Sect. Floccosae Hao)

Hacc species nova evidentur *S. resectoidi* Hand.-Mazz. et *S. vaccinioidi* Hand.-Mazz. similis, sed bracteis glanduloso-dentatis differt. Etiam a *S. annuliferae* Marq. et Airy-Shaw var. *dentatae* S. D. Zhao distincta truncis repentibus, foliis late ellipticis, bractis glabris vel basi tantum puberulis.

Frutex nanus, trunco repenti, fusco. Ramuli hornotini ascendentes circ. 25 cm alti, primo puberuli mox glabri, gemmae ovatae plano-compressae rubrifuscae subglabrae. Folia late elliptica vel late obovato-elliptica, 1.5—2.5 cm longa, 1—1.5 cm lata, apice obtusa, basi late cuneata vel subrotundata, juventute utrinque sparse puberula mox glabra, supra viridia, subtus paulo obscuriora, albida, margine glanduloso-serrata, petioli 4—7 mm longi primo pilosi. Amenta

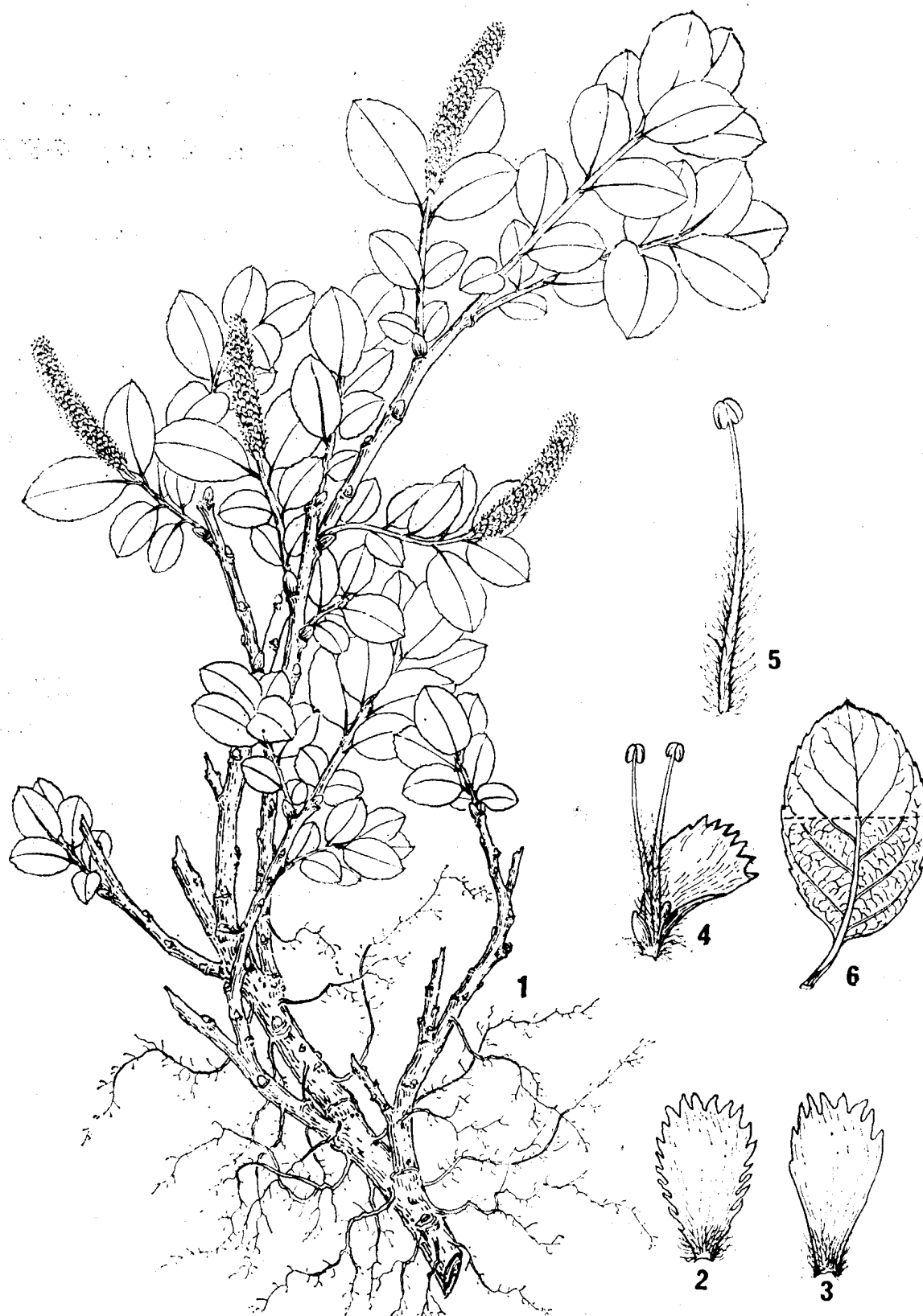


图3 溪旁矮柳 *Salix rivulicola* Mao et W. Z. Li, 1.雄花植株; 2.花序基部的苞片; 3.花序中、上部苞片; 4.雄花; 5.雄蕊; 6.叶的上、下面。(王红兵绘)

masculina coetanea, flavovirentes, in apice ramuli hornotini terminalia circ. 3 cm longa, circ. 6 mm crassa, rhachis pilosa; stamina 2, filamentis liberis 2/3 pilosis bracteis circ. duplo longioribus, antheris late oblongis; bracteae obovato-oblongae glabrae vel basi puberulae, apice subtruncatae glanduloso-serratae, basilaribus amentis margine omnino glanduloso-dentatis, glandulae binae. Flores feminei ignoti. Anthesis VIII.

Yunnan (云南): Gongshan Xian (贡山县), super Dulongjing alt. 4000 m, prope rivulum, amenta flavovirentes 8. VIII. 1938, T. T. Yu (俞德浚) 19795 (♂) (Holotypus, KUN).

本新种与藏截苞矮柳 *S. resectoides* Hand-Mazz. 和乌饭叶矮柳 *S. vaccinioides* Hand-Mazz. 均明显近似, 但苞片有腺齿而不同。又与齿苞矮柳 *S. annulifera* Marq. et Airy-Shaw var. *dentata* S. D. Zhao 的区别在于主干伏地生根, 叶宽椭圆形, 苞片无毛或仅基部有毛等。

无毛矮柳 新变种

Salix annulifera Marq. et Airy-Shaw var. *glabra* Mao et W. Z. Li, var. nov.

A typo abhorret bracteis apice non subcrenulatis filamentisque non villosis.

Yunnan (云南): Degen Xian (德钦县). alt. 4100 m, 17. VII. 1937, T. T. Yu 9050 (♂) (Holotypus, KUN).

不同于原变种在于苞片先端无齿, 连同花丝均无毛。

光果丛毛矮柳 新变种

Salix floccosa Burkill var. *leoigyna* Mao et W. Z. Li, var. nov.

Varietas haec a typo differt ovariis capsulisque glabris.

Yunnan (云南): Degen Xian (德钦县), alt. 3900 m 10 VII 1937, T. T. Yu (俞德浚), 8833 (♀) (Holotypus, KUN).

本变种子房, 蒴果均无毛, 不同于原变种。

石流垫柳 新种 图 4

Salix glareorum Mao et W. Z. Li, sp. nov.

(Sect. *Lindleyanae* Schneid.)

Species nova a *S. lindleyanae* Wall. ex Andens. var. *microphyllae* Anderss. Foliis subtus atro-viridibus non opace glaucescentis, praeter costis eximie elevatis ceterum non plance, bracteis non nervosis a *S. serpyllo* Anderss. Foliis linearibus margine integris revolutis, petiolis ad 3 mm longis, ab ambobus trunco procumbenti non radicanti recedit. Etiam a *S. kangdingensi* S. D. Zhao et C. F. Fang differt foliis minoribus linearibus nervis lateralibus utrinque indistinctis non subtus reticulatis margine revolutis.

Frutex pumilus. Trunco procumbenti non radicanti rubri-fusco. Rami ascendentes ad 50 cm alti, ramuli hornotini flavo-virentes, parce pubescentes,

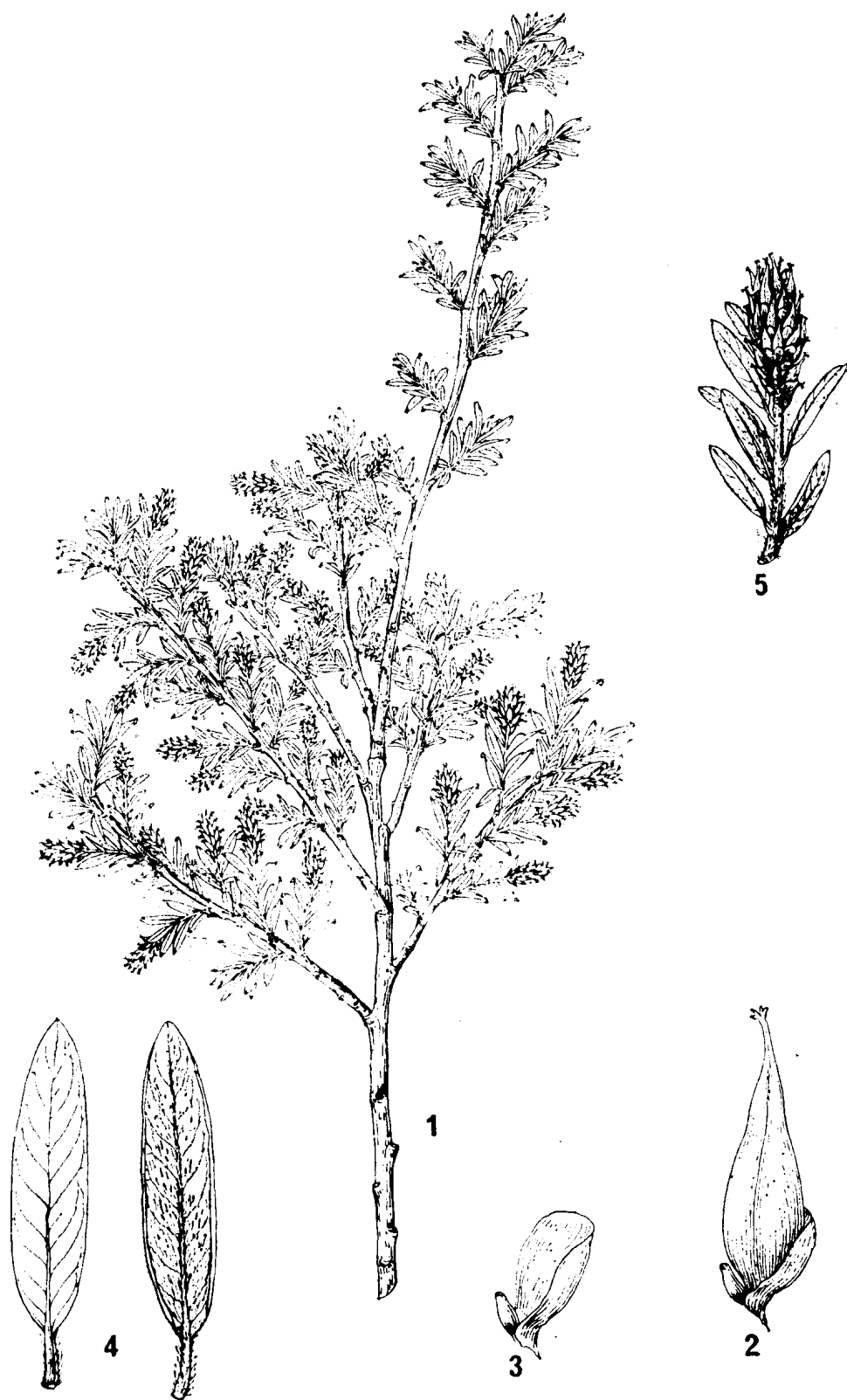


图4 石流垫柳 *Salix glara* Mao et W. Z. Li, 1.雌株枝部; 2.雌花;
3.苞片和腺体; 4.叶的上、下面; 5.花序及叶片。(王红兵绘)

anotini leviter castanei, glabri. Folia linearia 5—9 mm longa 2—4 mm lata, apice obtusa vel acuta, basi obtusa, supra viridia, glabra, costa impressa, nervis lateralibus indistinctis vel subimpressis, subtus atro-viridia juvenilia sparsim villosa demum glabrescentia, costa flavo-virens eximie elevata, nervis lateralibus indistinctis vel subelevatis, petioli 1—3 mm longi, primo villosi. Amenta coaetanea in apice ramuli hornotini terminalia, circ. 1 cm longa 6 mm crassa, circ. 25-flora, rhachis paulo pilosa; ovaria ovato-conica, glabra, subsessilia, stylis circ. 1.5 mm longis apice bipartitis, stigmatibus bifidis, circ. 1.5 mm longis apice bipartitis, stigmatibus bifidis, bracteae oblongae apice obtusirobundatae, utrinque glabrae paulo ciliatae, glandula unica ventralis cylindrica bractea circ. 4-plo breviora.

Yunnan (云南): Lijiang Xian (丽江县), Ganheba, Alt. 3050 m, in glareosa, flores subrosei, 26. V. 1985, Siao-British Exped. (中英考察队) 85-208 (♀) (Holotypus, KUN).

本新种不同于小叶青藏垫柳 *S. lindleyana* Wall. ex Anderss. var. *microphylla* Anderss. 在于叶下面深绿色, 非苍白色, 除中脉凸起外, 其余小脉不明显, 苞片无脉; 不同于多花垫柳 *S. serpyllum* Anderss. 在于叶条形, 边缘外卷, 无齿, 叶柄长达 3 毫米, 与二者不同的在于主干匍匐不生根。又与康定垫柳 *S. kangdingensis* S. D. Zhao et C. F. Fang 的区别在于叶较小, 条形, 侧脉在两面不明显, 下面无网脉, 边缘外卷。

岩壁垫柳 新种 图 5

Salix scopulicola Mao et W. Z. Li, sp. nov.

(Sect. *Lindleyanae* Schneid.)

Species nova habitu *S. kamanicae* C. Wang et P. Y. Fu et *S. trichomicrophyllae* C. Wang et P. Y. Fu similis, sed amentis 6—8 (non 10—21—35)-floris, filamentis glabris non basi pubescentibus bene distincta. Etiam a *S. ovatomicrophyllae* Hao differt ramulis hornotinis pubescentibus, foliis apice acutis, infra pubescentibus.

Frutex pulvinatus vix 10 cm altus. Trunco prostrato radicante, rami procumbenti vel leviter ascendenti, hornotini villosi, anotini glabri castanei; gemmae ovatae, rutilantes, subglabrae. Folia ovato-oblonga, 4—8 mm longa, 2—4 mm lata, apice acuta vel acutiuscula, basi obtusa vel subrotundata, supra viridia subglabra papillata, costa impressa, nervis lateralibus inconspicuis subtus juvenilia dense atgentec-pubescentis demum glabrescentia, albida, costa elevata, nervis lateralibus circ. 4-jugis conspicuis, margine integra; petioli 1—2 mm longi, infra pubescentes. Amenta coaetanea, catmina, 5 cm longa, 4 mm crassa, in apice ramuli hornotini terminalia 6—8 flora; stamina 2, filamentis liberis glabris bracteis sublongioribus; bracteae oblongae, extus parce argenteo-crispulo-pubescentes, apice subrotundatae dense ciliatae, glandulae binae, ventralis



图5 岩壁垫柳 *Salix scopulicola* Mao et W. Z. Li, 1.雄植株; 2.雄花枝;
3.雄花序; 4.雄花; 5.雄蕊; 6.叶的上、下面。(王红兵绘)

dorsalisque urceolates subaequimagnae bractea subduplo breviores. Flores feminei ignoti. Anthesis VII.

Yunnan (云南): Gongshan Xian (贡山县) super Dulongjing, alt, 4000 m in scopulis, amenta carmina, 10 VII. 1938, T. T. Yu (俞德浚) 19864 (♂) (Holotypus, KUN).

本新种外形类似卡马垫柳 *S. kamanica* C. Wang et P. Y. Fu 和毛小叶垫柳 *S. trichomicrophylla* C. Wang et P. Y. Fu 但花序具6—8花，不是10—20—35花，花丝无毛，不是下部有毛可以区别。又与卵小叶垫柳 *S. ovatomicrophylla* Hao 的不同在于当年生枝有毛，叶先端尖，下面有柔毛等。

裸果贡山柳 新变种

Salix fengiana C. F. Fang et Ch. Y. Yang var. *gymnocarpa* Mao et W. Z. Li, var. nov.

Differt a typo ovariis capsulisque glabris glandulis dorasalibus nulis.

Yunnan (云南): Bijiang Xian (碧江县), Gaoligongshan, ad fines n. 28, alt. 3600 m, in saxosis, 1 m altus, 14. VII. 1978, Bijiang Exped. (碧江队) 114 (♀) (Holotypus, KUN); Gongshan Xian (贡山县) Changputong, alt. 3400 m, in fruticetis declivitatis, 1.5 m altus, 10. IX. 1940, K. M. Feng (冯国楣) 7681 (♂).

与原变种的区别在于子房，蒴果均无毛且无背腺。

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